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Government
Publications

Fifth Edition

Rock Talk

Glaciers

A glacier is a large frozen river of snow, ice, water and rocks. Glaciers form over many years from accumulated snow and ice that does not melt in the warm summer months. The mass of snow and ice compacts over the years until it hardens into ice.

Because of its very heavy weight, a glacier can flow down mountains and hills sometimes moving at a rate of tens of metres per day. Glaciers can even flow along flat land - these are called ice sheets.

As glaciers move, they wear away the land below, picking up or plucking large amounts of rocks, minerals and soil. If a glacier passes over a mineral deposit such as diamonds, gemstones or gold, the glacier will wear away the top of the deposits and spread the minerals out in a fan shape in the direction the glacier is moving. Prospectors look for these mineral trails and can follow the trail back to the deposit.

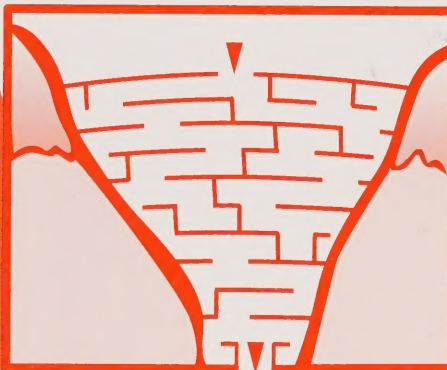
Most of Nunavut was shaped by ice sheets and glaciers. On Baffin Island glaciers carved out deep valleys and fiords, some more than 900 metres deep. That's equal to more than 14 hockey rinks in length! Ice caps and glaciers still cover over 150,000 square kilometres of Nunavut.

SOME TERMS YOU SHOULD KNOW

Iceberg - a block of ice that has broken off from the face of a glacier and is floating in a body of water.

Fiord - a U-shaped valley formed by glaciers as they move, eroding the earth below.

Ice cap - smaller than an ice sheet, it is a mass of ice and snow that permanently covers a large area of land such as a mountain peak.



Fast Fact

Glacier ice is the largest reservoir of fresh water on Earth and can be found on every continent except Australia. Other countries are interested in Nunavut's glaciers as a potential source of fresh water for their people to use.

did you know?

Approximately 90 per cent of an iceberg is below the water's surface.

Just a few of Nunavut's ice caps and glaciers:

- 1) Agassiz Ice Cap (Ellesmere Island)
- 2) Müller Ice Cap (Axel Heiberg Island)
- 3) Prince of Wales Icefield (Ellesmere Island)
- 4) Devon Ice Cap (Devon Island)
- 5) Barnes Ice cap (Baffin Island)
- 6) Penny Ice Cap (Baffin Island)



Contact Us

If you have a geology question you want answered, send an email to nunavutminerals@inac.gc.ca.

Rock Talk is produced by Indian and Northern Affairs Canada, Nunavut Regional Office.

We welcome your questions, comments and suggestions. Please email us at nuinfo@ainc-inac.gc.ca or phone 867-979-4500.

Visit our website at www.ainc-inac.gc.ca/nunavut.





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